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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 3: Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603601F: Conventional Weapons Technology							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	16.771	14.296	15.755	0.000	15.755	19.357	20.086	20.337	17.693	Continuing	Continuing
63670A: Conventional Weapons Development	16.771	14.296	15.755	0.000	15.755	19.357	20.086	20.337	17.693	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program develops, demonstrates, and integrates ordnance and advanced guidance technologies for air-launched conventional weapons. The program includes development of conventional ordnance technologies including warheads, fuzes, and explosives; and development of advanced guidance technologies including seekers, navigation and control, and guidance. This program is in the Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	17.166	14.356	0.000	0.000	0.000
Current President's Budget	16.771	14.296	15.755	0.000	15.755
Total Adjustments	-0.395	-0.060	15.755	0.000	15.755
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.060			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-0.395	0.000	15.755	0.000	15.755

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 63670A: Conventional Weapons Development

Congressional Add: Energetic Device Quality and Reliability Improvements Using Computer Aided Process Control.

FY 2009	FY 2010
2.393	0.000

**UNCLASSIFIED**

R-1 Line Item #25

Page 1 of 7

**UNCLASSIFIED**

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<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b>		<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: <i>Integrated Targeting Devices.</i>		2.992	0.000
Congressional Add Subtotals for Project: 63670A		5.385	0.000
Congressional Add Totals for all Projects		5.385	0.000
<b><u>Change Summary Explanation</u></b> The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. A detailed explanation of changes between the two budget positions is not provided because it cannot be made in a relevant manner.  C. Performance Metrics (U) Under Development.			

**UNCLASSIFIED**

# UNCLASSIFIED

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
63670A: Conventional Weapons Development	16.771	14.296	15.755	0.000	15.755	19.357	20.086	20.337	17.693	Continuing	Continuing
A. Mission Description and Budget Item Justification											
This project develops, demonstrates, and integrates ordnance and affordable, autonomous, and adverse weather resistant guidance technologies for enhancing the effectiveness of air-launched conventional weapons delivered from manned and unmanned aerospace vehicles. The project develops conventional ordnance including warheads, fuzes, explosives, carriage and release, munition integration technologies, terminal seekers, midcourse navigation sensors for stand off delivery weapons, and target detection and identification processing algorithms for reducing target location error to improve target kill probability. This project improves the capability for conventional munitions supporting an Air Expeditionary Force.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Develop and demonstrate advanced air-delivered munitions fuze and mass-focusing warhead technologies to improve munition effectiveness.							2.666	3.440	0.000	0.000	0.000
FY 2009 Accomplishments: In FY 2009: Continued development of an active imaging target device that can provide warhead aimpoint selection for mass focused warheads.											
FY 2010 Plans: In FY 2010: Complete development of an active imaging target device that can provide warhead aimpoint selection for mass focused warheads.											
FY 2011 Base Plans: In FY 2011: Not Applicable.											

UNCLASSIFIED

R-1 Line Item #25

Page 3 of 7

# UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: In FY 2011 OCO: N/A.						
MAJOR THRUST: Develop and demonstrate conventional munition subsystem technologies to include innovative air-delivered munition carriage and release equipment and miniature weapon release concepts.  FY 2009 Accomplishments: In FY 2009: Began developing a missile with the capability to defeat a broad range of small and highly agile air targets as well as high value ground targets, such as enemy air defenses.  FY 2010 Plans: In FY 2010: Continue development of a small short-range precision-guided munition capable of attacking multiple moving targets. Continue developing a missile with the capability to defeat a broad range of small and highly agile air targets as well as high value ground targets, such as enemy air defenses. Begin developing a conventional ordnance package consisting of a case, fuze, fuzewell, and explosive fill capable of penetrating high performance concrete at conventional velocities.  FY 2011 Base Plans: In FY 2011: Continue development of a small short range precision-guided submunition capable of attacking multiple moving targets. Continue developing a missile with capability to defeat a broad range of small and highly agile air targets as well as high value ground targets, such as enemy air defenses. Continue developing a conventional ordnance package consisting of a case, fuze, fuzewell, and explosive fill capable of penetrating high performance concrete at conventional velocities.  FY 2011 OCO Plans: In FY 2011 OCO: N/A.		0.258	4.696	13.203	0.000	13.203
MAJOR THRUST: Develop and demonstrate advanced conventional armament warhead technologies to destroy hardened targets.		3.159	0.000	0.000	0.000	0.000

UNCLASSIFIED

R-1 Line Item #25

Page 4 of 7

**UNCLASSIFIED**

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Demonstrated an ordnance package with improved counter-air lethality to address cruise missile and counter-air targets, as well as attacking a subset of ground targets to include enemy air defenses. Demonstrated a multi-mode warhead package designed for precision guided submunitions.						
FY 2010 Plans: In FY 2010: Not Applicable.						
FY 2011 Base Plans: In FY 2011: Not Applicable.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A.						
MAJOR THRUST: Develop and demonstrate advanced conventional armament seeker technologies for miniature munitions application to increase the probability of kill and minimize collateral damage.		5.303	3.446	0.500	0.000	0.500
FY 2009 Accomplishments: In FY 2009: Continued design and demonstration of a low cost laser detection ordnance seeker to increase data rates and LADAR moving parts compared to earlier generation LADAR seeker technologies. Flight tested a multi-mode radar seeker capable of engaging both moving and stationary targets in adverse weather.						
FY 2010 Plans: In FY 2010: Complete demonstration of a low cost laser detection ordnance seeker to increase data rates. Investigate the design details for a low cost multispectral seeker to provide autonomous, all weather operation.						

**UNCLASSIFIED**

R-1 Line Item #25

Page 5 of 7

**UNCLASSIFIED**

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Complete design trades and select an approach to a multispectral autonomous all weather seeker.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A.						
MAJOR THRUST: Develop and demonstrate advanced conventional armament navigation and control technologies to improve armament navigation accuracy, stand off range, and weapons control and operation.		0.000	2.714	2.052	0.000	2.052
FY 2009 Accomplishments: In FY 2009: Not Applicable.						
FY 2010 Plans: In FY 2010: Develop a small guided sub-munition to attack multiple moving targets.						
FY 2011 Base Plans: In FY 2011: Demonstrate a small guided sub-munition capable of attacking moving targets.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A.						
Accomplishments/Planned Programs Subtotals		11.386	14.296	15.755	0.000	15.755
		FY 2009	FY 2010			
Congressional Add: Energetic Device Quality and Reliability Improvements Using Computer Aided Process Control.		2.393	0.000			

**UNCLASSIFIED**

R-1 Line Item #25

Page 6 of 7

# UNCLASSIFIED

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>				
<i>FY 2009 Accomplishments:</i> In FY 2009 : Conducted Congressionally-directed effort for Energetic Device Quality and Reliability Improvements Using Computer-Aided Process Control.											
<i>FY 2010 Plans:</i> In FY 2010: Not Applicable.											
Congressional Add: Integrated Targeting Devices.  <i>FY 2009 Accomplishments:</i> In FY 2009: Conducted Congressionally-directed effort for Integrated Targeting Devices.  <i>FY 2010 Plans:</i> In FY 2010: Not Applicable.						2.992	0.000				
Congressional Adds Subtotals						5.385	0.000				
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PE 0602602F: <i>Conventional Munitions.</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>D. Acquisition Strategy</b> Not Applicable.											
<b>E. Performance Metrics</b> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

UNCLASSIFIED

R-1 Line Item #25

Page 7 of 7